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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,949	08/08/2001	Kazuhiro Shimura	P100158-00040	2066

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EXAMINER

MAKI, STEVEN D

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 09/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/923,949	Applicant(s) SHIMURA, KAZUHIRO	
	Examiner Steven D. Maki	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2004 and 24 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3, 4 and 6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1733

- 1) The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

- 2) Claims 1, 3, 4 and 6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 1, the subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention is the limitation of the second cavity being disposed "in close proximity" to the first cavity. The original disclosure fails to reasonably convey locating the second cavity "in close proximity" to the first cavity. The original disclosure fails to describe and/or define "in close proximity". In particular, the description of "in close proximity" has no explicit basis in the original written disclosure and it is not seen how the original figures (including for example the illustration of cavities 3 and 4 in figure 6(a)) supports "in close proximity". Furthermore, the limitation of the second cavity being disposed "in close proximity" to the first cavity includes cavities spaced by distances greater than that reasonably conveyed by the illustrated distance between the cavities shown for example in figure 6(a).

- 3) The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 1733

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4) Claims 1, 3, 4 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the scope and meaning of "in close proximity" is unclear. One of ordinary skill in the art is not reasonably appraised by the scope of protection afforded by this language. The meets and bounds of "in close proximity" are unclear; it being emphasized that the original disclosure provides no guidance as to the meaning of "in close proximity. Examples: It is unclear if "in close proximity" reads on the cavities being located in adjacent land portions. It is unclear if "in close proximity" reads on the cavities being located in the same land portion. It is unclear if "in close proximity" requires the cavities to be spaced apart by a distance about equal to a width of the cavities.

5) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Awaya et al

7) **Claims 1, 3, 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Awaya et al (US 4226274) in view of Havens (US 2261025).**

Awaya et al discloses a wear indicator comprising colored rubber. A plurality of wear indicators may be arranged in a rib so as to be isolated from the circumferential grooves. See figure 6. At the tread surface, each wear indicator has a rectangular shape. See figure 6. Since each wear indicator has a triangular cross section (see for example figure 2), the surface shape of each wear indicator (and the v-shaped cavity in which it is disposed) continuously changes with wear of the tread. Awaya et al does not recite an isolated recess whose shape does not change with wear.

As to claim 1, It would have been obvious to one of ordinary skill in the art to use Awaya et al's wear indicators in a tread having isolated slits (second cavities) of constant length so as to obtain the benefit of the tread having means to indicate wear (Awaya et al) and means for increasing traction (Havens). The claimed first cavity reads on the v-shaped cavity in which the triangular portion of the wear indicator in the figure 6 embodiment of Awaya et al is located. The claimed second cavity reads on the slits of Havens. As to close proximity, it would have been obvious to one of ordinary skill in the art to arrange Awaya et al's wear indicators and Havens slits such that a wear indicator is "in close proximity" to a slit since Awaya et al suggesting locating wear indicators in a central ground contacting area of the tread (figure 6) and Havens suggesting locating slits in a central ground contacting area of the tread (figure 1). The same location (a central ground contacting area of the tread) is suggested by both

Art Unit: 1733

Awaya et al and Havens. In claim 3, the limitation of the wall surfaces being colored reads on the colored triangular section wear indicator being on the v-shaped walls. As to claim 4, the colored triangular section is buried in the v-shaped cavity since it fills the v-shaped cavity. As to claim 6, note that the wear indicator has a rectangular shape at the tread surface. Furthermore, it would have been obvious to form Havens slits with a quadrilateral shape since Havens teaches forms the slits as rectilinear slits.

Great Britain '975

8) **Claim 1 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Great Britain '975 (GB 546975).**

Great Britain '975 discloses a pneumatic tire having a tread comprising ribs separated by circumferential grooves wherein each rib comprises groups of holes wherein the holes are disposed apart and in isolation from the circumferential grooves. As can be seen from the figures (e.g. figures 1, 6, 7, 8, 9, 10 or 14), the holes of one group are "in close proximity" since the illustrated spacing between the holes is about equal to the width of a hole. With respect to hole shape, Great Britain '975 teaches that the holes may be of any suitable shape such as circular, rectangular, square, diamond, triangle, star or hexagon. Great Britain '975 adds that "... any one group or groups may consist of holes having one or other or a mixture of such shapes" (page 1 lines 94-96). With respect to hole shape, Great Britain '975 notes that the holes may be of uniform section for the whole of their depth or may be tapering (page 1 lines 97-99).

As to claim 1, the claimed tire is anticipated by the above disclosure of Great Britain '975. The cavity having the first surface shape that continuously changes reads

Art Unit: 1733

on the hole having a tapering cross section. The cavity having the second surface shape that remains constant reads on the hole having uniform section. In any event: it would have been obvious to one of ordinary skill in the art to use a mixture of first holes having a tapering cross section (continuously changing first surface area with tread wear) and holes having a uniform section for the whole of their depth (second surface area remaining constant with tread wear) such that a first hole is "in close proximity" to a second hole since: (1) Great Britain '875 teaches that any one group of holes may have a mixture of different shapes; (2) Great Britain '875 describes a hole having a uniform cross sectional shape for its whole depth and a hole having a tapering cross sectional shape; and (3) Great Britain '875 shows "closely spacing" the holes of one group in figures 1, 6-10 and 14 such that the spacing between the holes is about equal to a width of the hole. Although Great Britain '875 does not teach a method of determining tread wear by using the hole having a constant cross-sectional shape as a reference, none of the pending claims require this subject matter. Furthermore, the description of "wear indicator" relates to intended use and fails to require tread structure not shown by Great Britain '975.

9) **Claims 3, 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Great Britain '975 as applied above and further in view of Bins (US 3833040).**

As to claims 3, 4 and 6, it would have been obvious to one of ordinary skill in the art to color the surface of the tread including the recessed surfaces (i.e. the surfaces of the grooves and holes) with a different color than that of surrounding rubber since Bins suggests coloring groove walls with a layer of colored material so that when the color

Art Unit: 1733

wears off, the user knows that the tread / tire should be replaced. The claimed quadrilateral shape set forth in claim 6 would have been obvious since Great Britain '975 expressly teaches that the holes may have a rectangular shape. Claim 4 fails to require the colored member to be only at the bottom of the cavity.

Remarks

10) Applicant's arguments with respect to claims 1, 3, 4 and 6 are have been considered but are moot in view of the new ground(s) of rejection.

As to deleting --as a reference-- and adding --in close proximity-- (see amendment filed 5-24-04), note the new 112 rejections. Also, note (1) the new application of Awaya et al and Havens and (2) the application of Great Britain '975 (newly cited), which is considered to clearly teach cavities in "close proximity".

Applicant's arguments filed 6-10-04 and 5-24-04 have been fully considered but they are not persuasive.

With respect to Awaya et al and Havens, applicant argues that at any optional time point after the use is commenced of a fresh tire, it is expediently possible to ascertain the amount or degree of wear of the tire in use. This argument is not persuasive. There are no unexpected results of ascertaining wear over Awaya et al since Awaya et al teaches that the exposed side of the wear indicator serves as a quantitative measure of the remaining tread in the tire.

Applicant argues that there is no motivation to combine the slits of Havens and the wear indicator of Awaya et al together. The examiner disagrees. Havens and Awaya et al share the common subject matter of a tire tread having circumferential

Art Unit: 1733

grooves. Awaya et al motivates one of ordinary skill in the art to add wear indicators to such a tread so that the amount of remaining tread can be determined. Havens motivates one of ordinary skill in the art to add slits to such a tread to improve traction.

With respect to Awaya et al and Havens, applicant argues that Havens slits do not come under a wear indicator. This argument is not persuasive since the pending tire claims fail to require a method step of using the cavity having the constant second surface shape as a reference in the determination of the amount or degree of wear in a tire. It is emphasized that "as a reference" has been deleted from claim 1. See amendment filed 5-24-04.

11) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

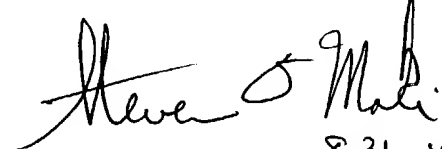
Art Unit: 1733

12) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki
August 31, 2004


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8-31-04